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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|---------------------------------|---------------------|------------------|
| 10/089,213 | 03/25/2002 | Danielle Geertruida Irene Petra | 246152016500 | 3222 |
| 7590 05/10/2004 | | | EXAMINER | |
| Kate H Murashige Morrison & Foerster Suite 500 3811 Valley Centre Drive San Diego, CA 92130-2332 | | | CHOI, LING SIU | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1713 | |
| DATE MAILED: 05/10/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/089,213 | Applicant(s) PETRA ET AL. | |
| | Examiner Ling-Siu Choi | Art Unit 1713 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. This Office action is in response to the Preliminary Amendment filed 25 March 2002. Claims 1-22 are now pending, wherein claims 1-11 are drawn to a catalyst for asymmetrical transfer hydrogenation; claim 12 a process to prepare the catalyst; and claims 13 -22 a process to prepare an enantiomerically enriched compound.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is noted that the catalyst claimed in the present invention helps to transfer hydrogen from a hydrogen donor to a hydrogen acceptor to achieve reduction and oxidation processes. The recitation "a catalyst for asymmetrical transfer **hydrogenation**" causes confusion because it does not only reduce a compound but also oxidize a compound (claims 16-17 - reduction; claims 17-18 - oxidation). In order to avoid such confusion, "a catalyst for asymmetrical transfer hydrogenation" cited on line 1 of claim 1 is suggested to be changed to --a catalyst for asymmetrical hydrogen

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transfer--.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-4, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kisch (US 4,325,793).

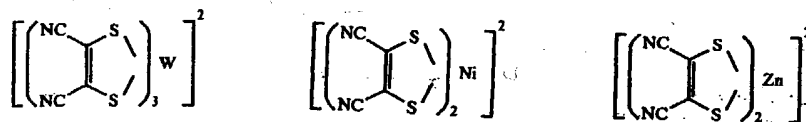
The present invention relates to a catalyst for asymmetrical transfer hydrogenation comprising,

| | |
|---|---|
| transition metal compound | iridium, ruthenium, rhodium, or cobalt |
| nitrogen-containing enantiomerically enriched ligand | containing sulphur in the form of a thioether or a sulfoxide and bound to the nitrogen via two or more carbon atoms |

(summary of claim 1)

Kisch disclose a catalyst to split water to provide hydrogen under the irradiation with actinic light, wherein the metal complex can be

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The difference between the present claims and the disclosure of Kisch is the requirement of the use of Re or Co in the metal complex.

Kisch discloses that the metal of the complex is preferably "...W...Re...Co, Ni...Zn...." (col. 1, lines 54-56). A conclusion can then be drawn that the use of Re or Co is equivalent to or exchangeable with the use of W, Ni, or Zn in the metal complex. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Re or Co in the metal complex and thereby obtain the present invention.

Conclusion

6. Claims 2, 5-11, and 14-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling-Siu Choi whose telephone number is 571-272-1098

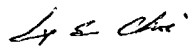
If attempt to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, David Wu, can be reach on 571-272-1114.



Ling -Siu Choi

May 3, 2004